

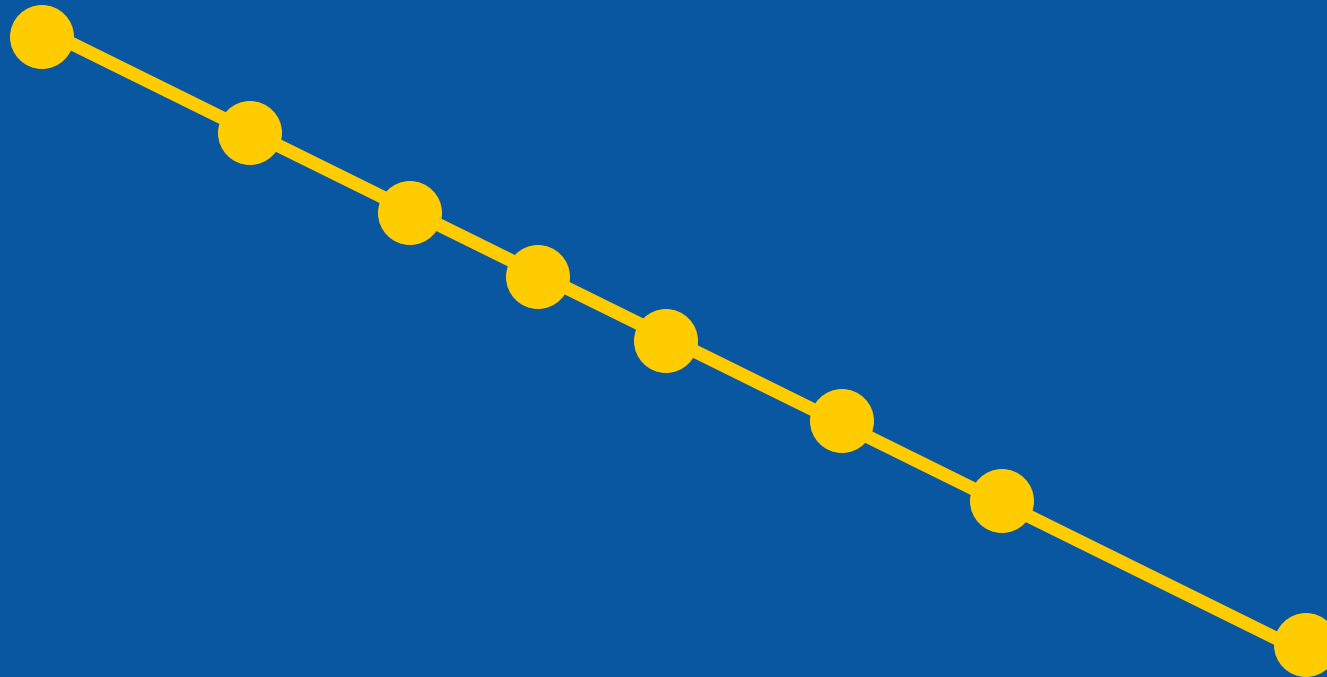
# Implementation Of Lame Delegation Policy

Ray Plzak  
ARIN

## Background

- MAR 2002 – Policy Formally Proposed
- APR 2002 – ARIN IX
- JUN 2002 – Scripts Developed & Tested
- Further Discussion on Email Lists
- OCT 2002 – ARIN X
- NOV 2002 – Policy Adopted
- DEC 2002 – Implementation Activity Begins

# Policy Summary



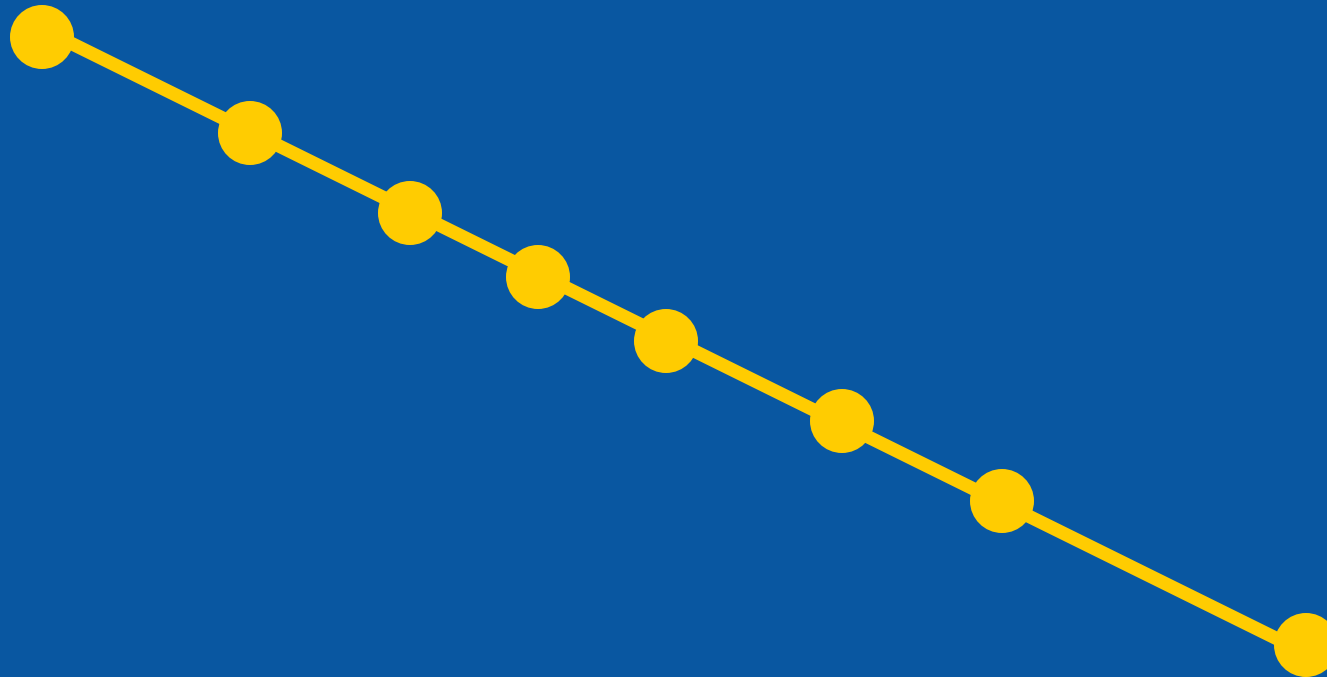
16 March 2003

IEPG @ IETF 56

San Francisco

# Policy Summary

Four Phases



16 March 2003

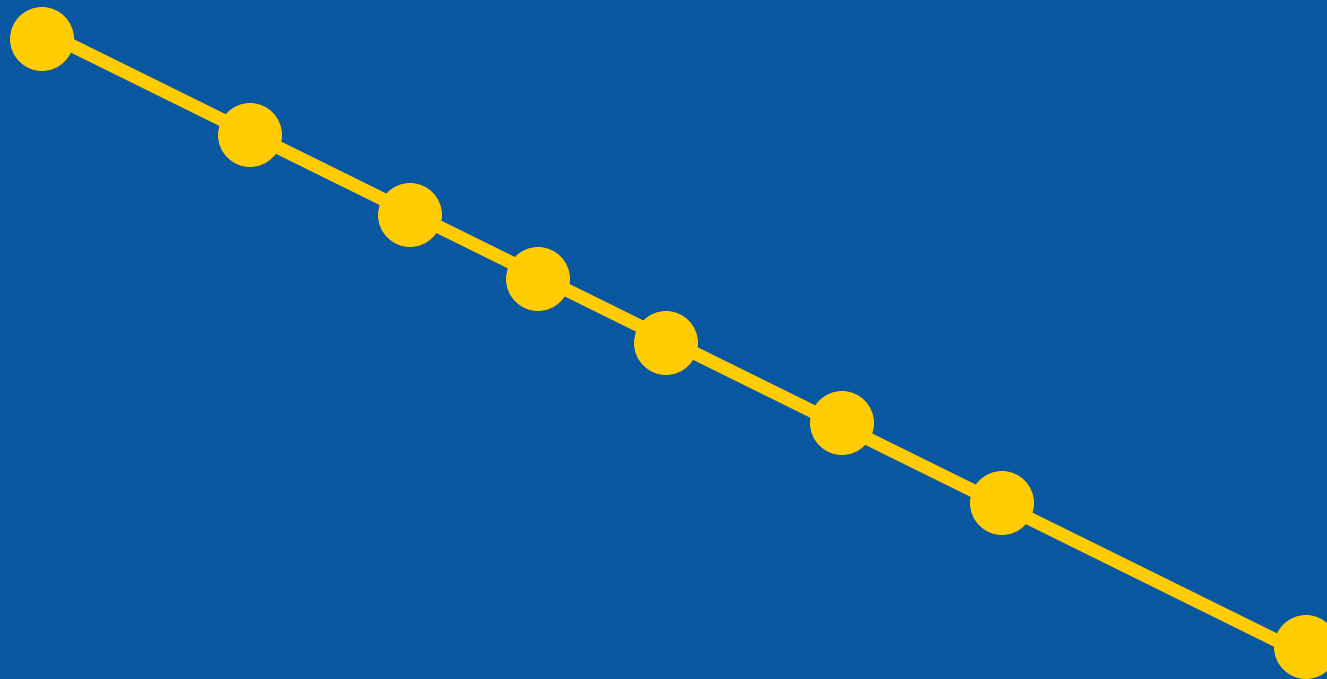
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San Francisco

# Policy Summary

Four Phases

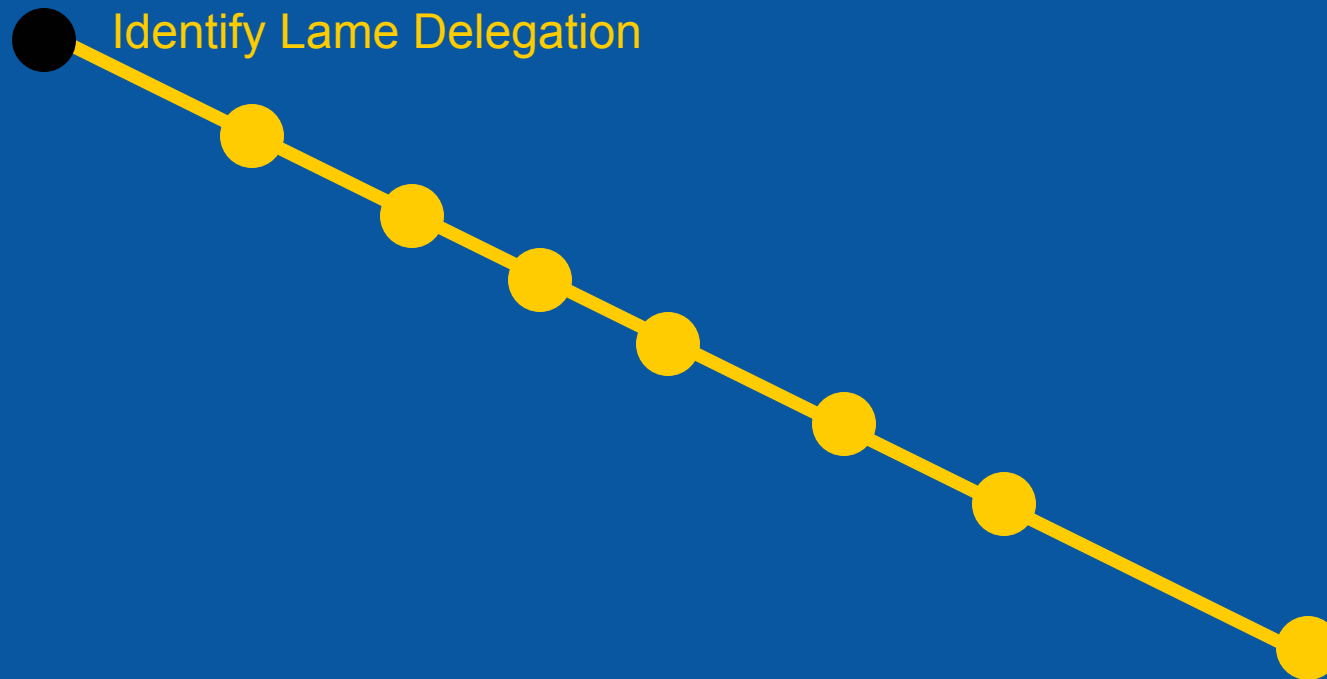
- Test



# Policy Summary

Four Phases

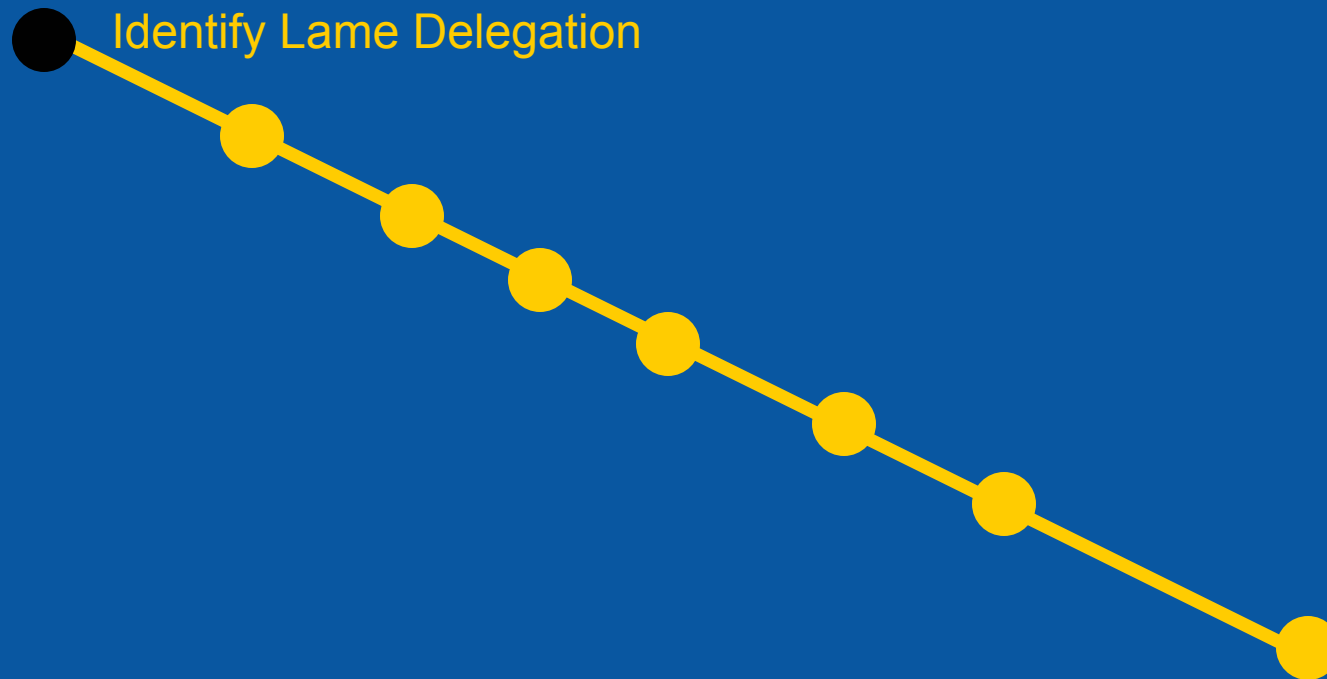
- Test



# Policy Summary

## Four Phases

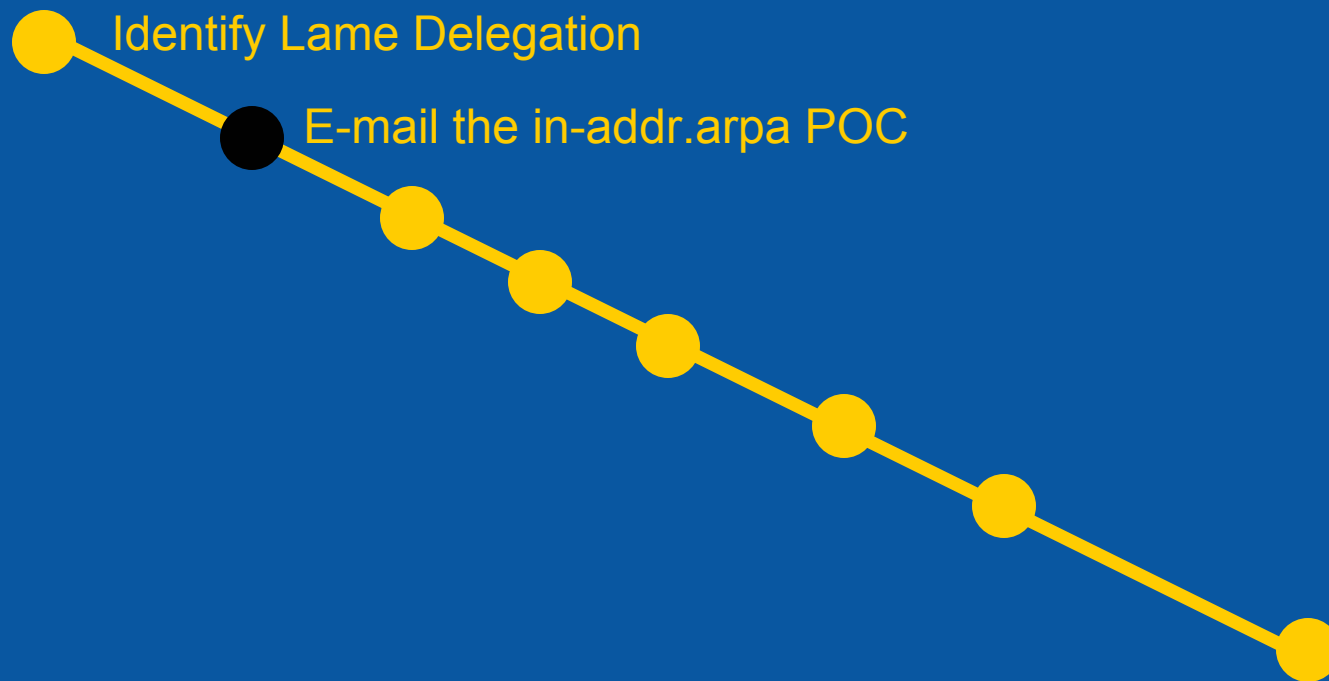
- Test
- Attempt Contact



# Policy Summary

## Four Phases

- Test
- Attempt Contact

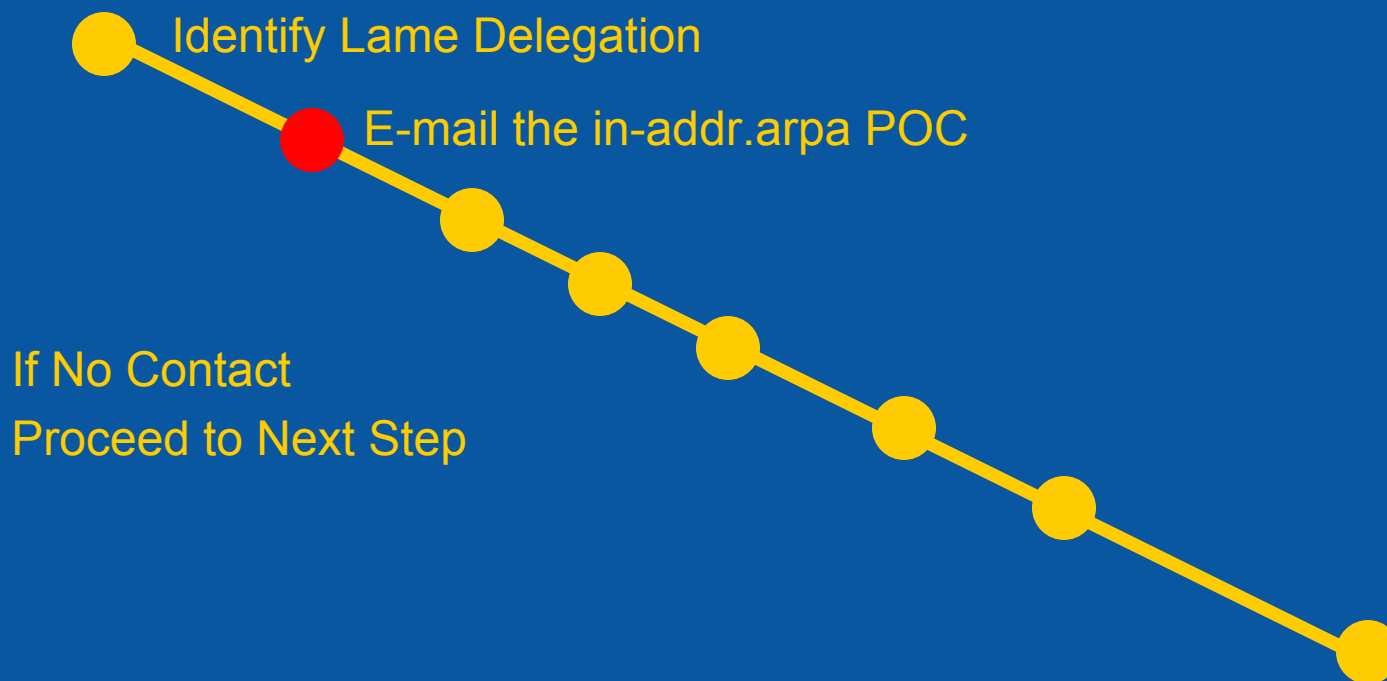




# Policy Summary

## Four Phases

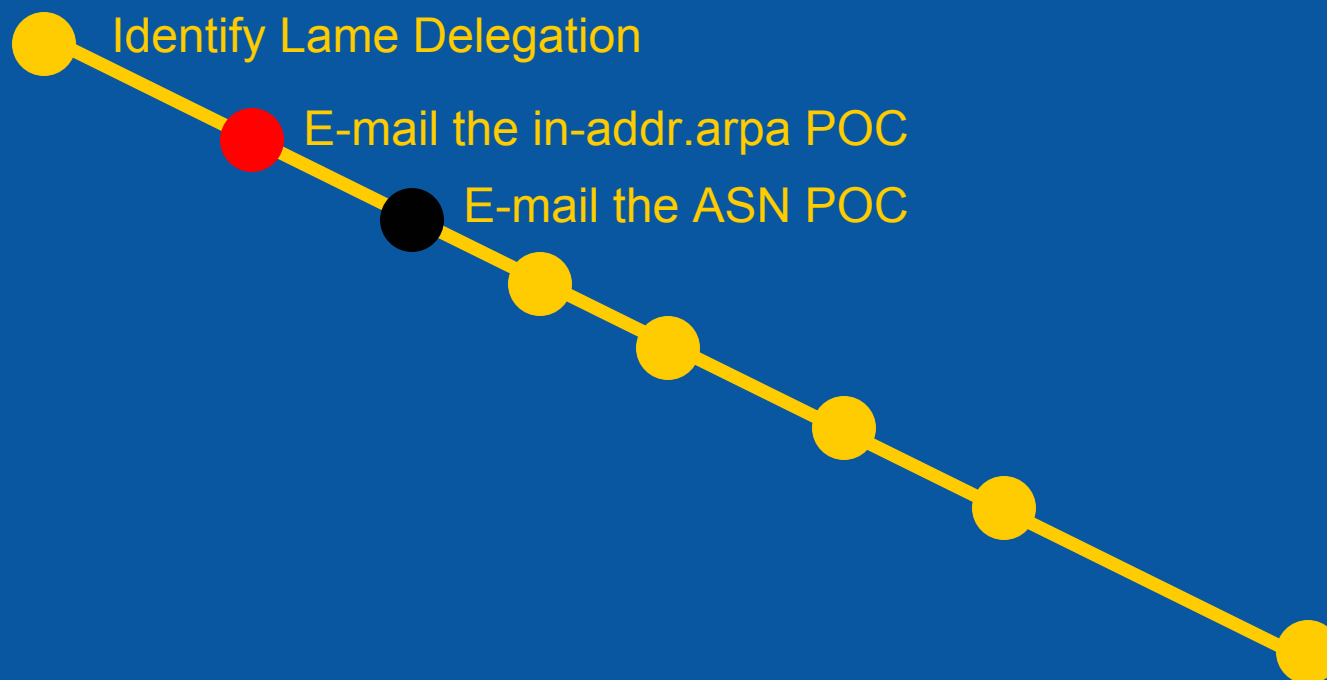
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# Policy Summary

## Four Phases

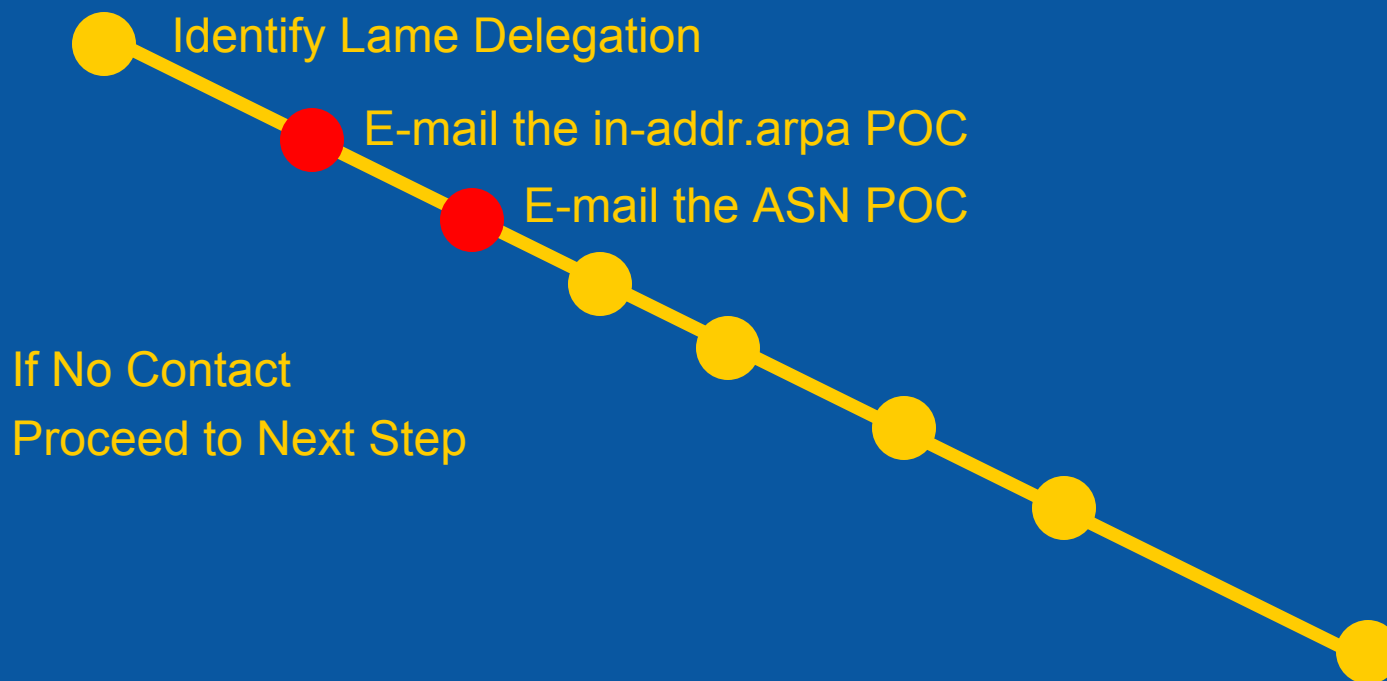
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# Policy Summary

## Four Phases

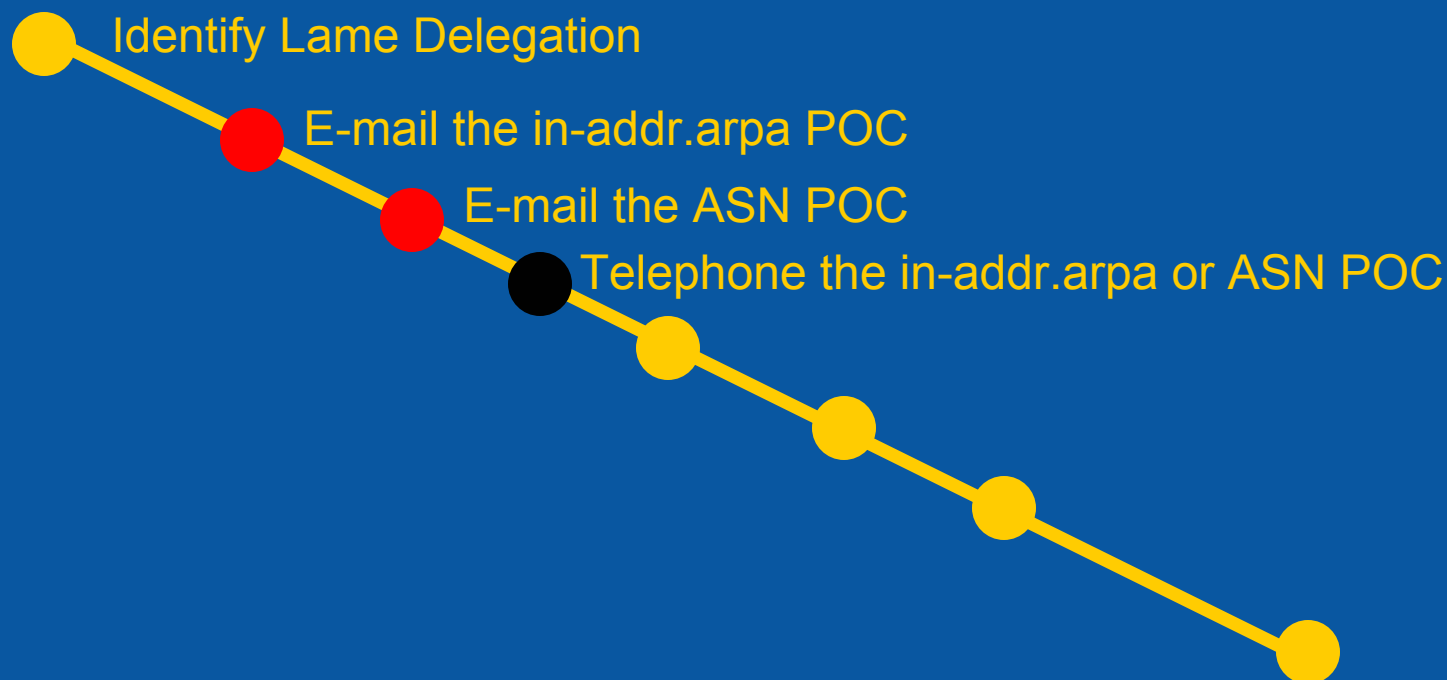
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- Attempt Contact



# Policy Summary

## Four Phases

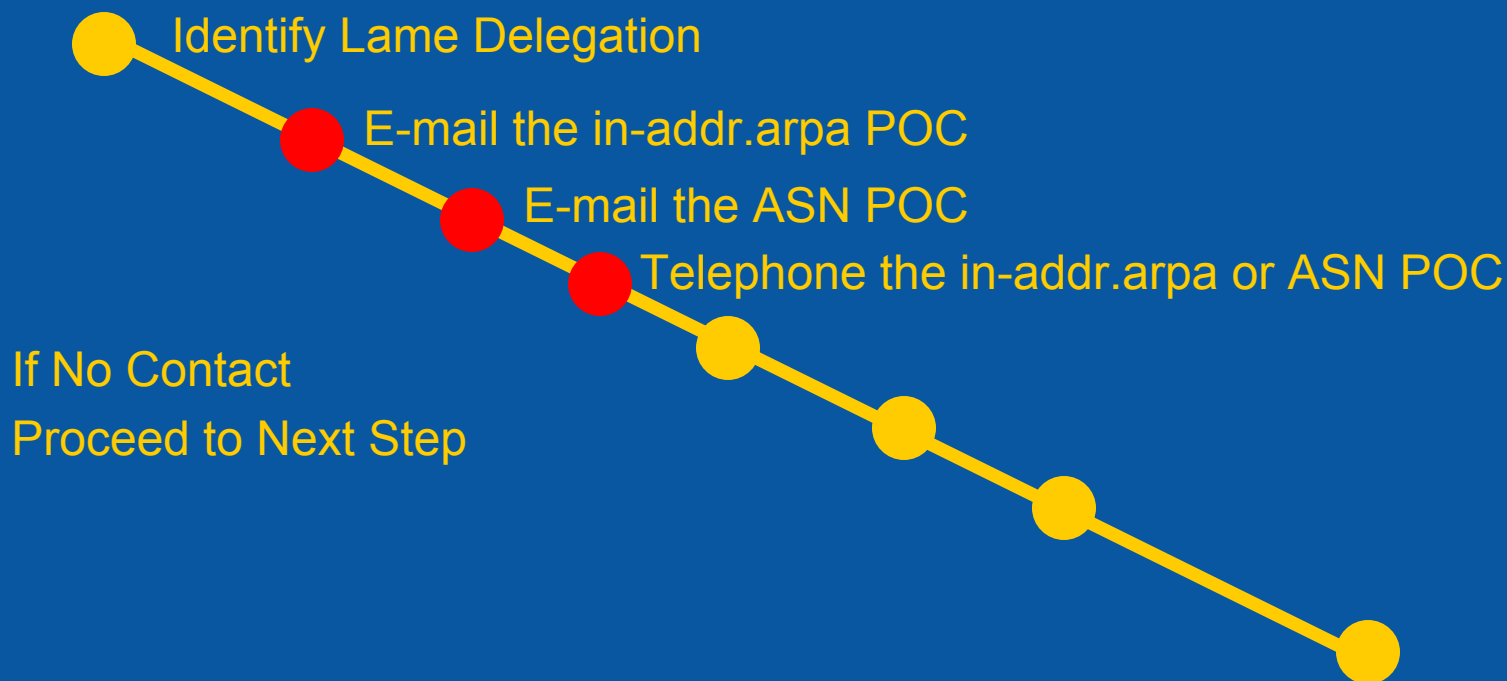
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# Policy Summary

## Four Phases

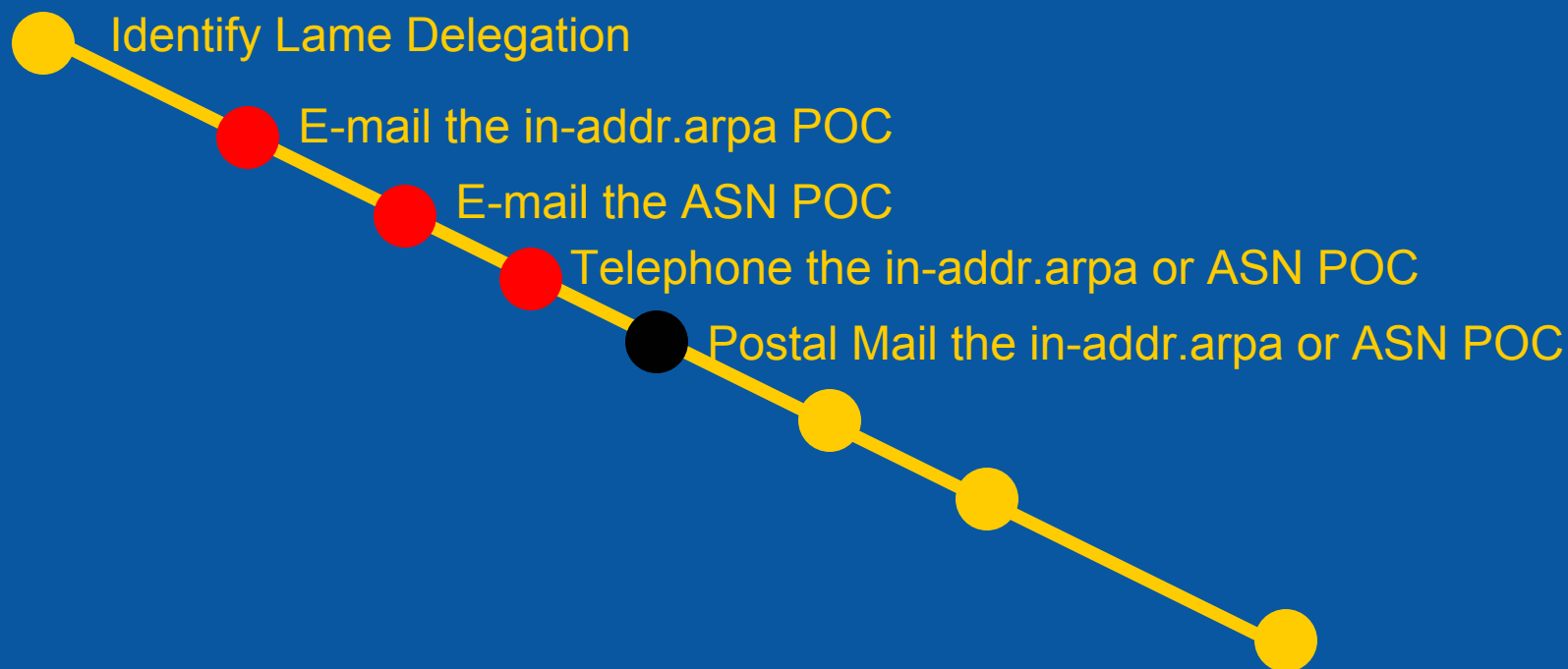
- Test
- Attempt Contact



# Policy Summary

## Four Phases

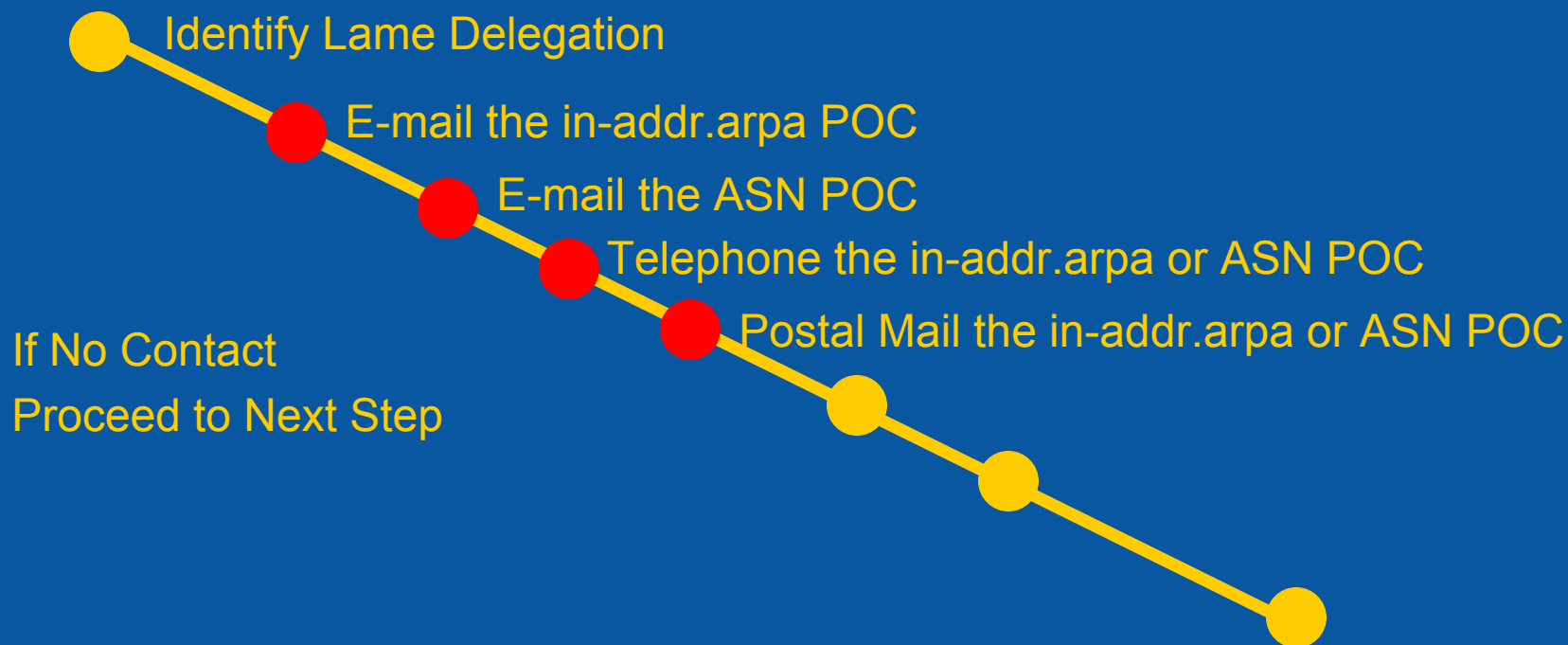
- Test
- Attempt Contact



# Policy Summary

## Four Phases

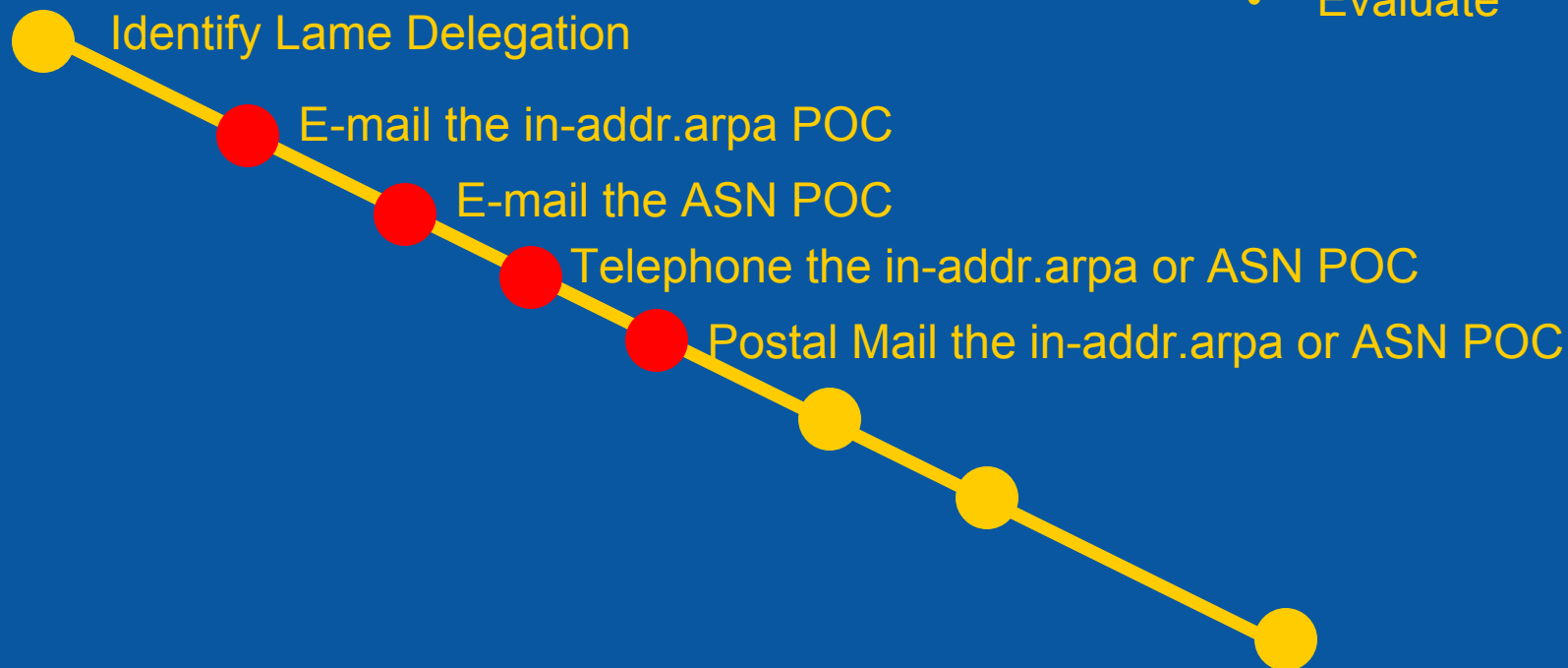
- Test
- Attempt Contact



# Policy Summary

## Four Phases

- Test
- Attempt Contact
- Evaluate

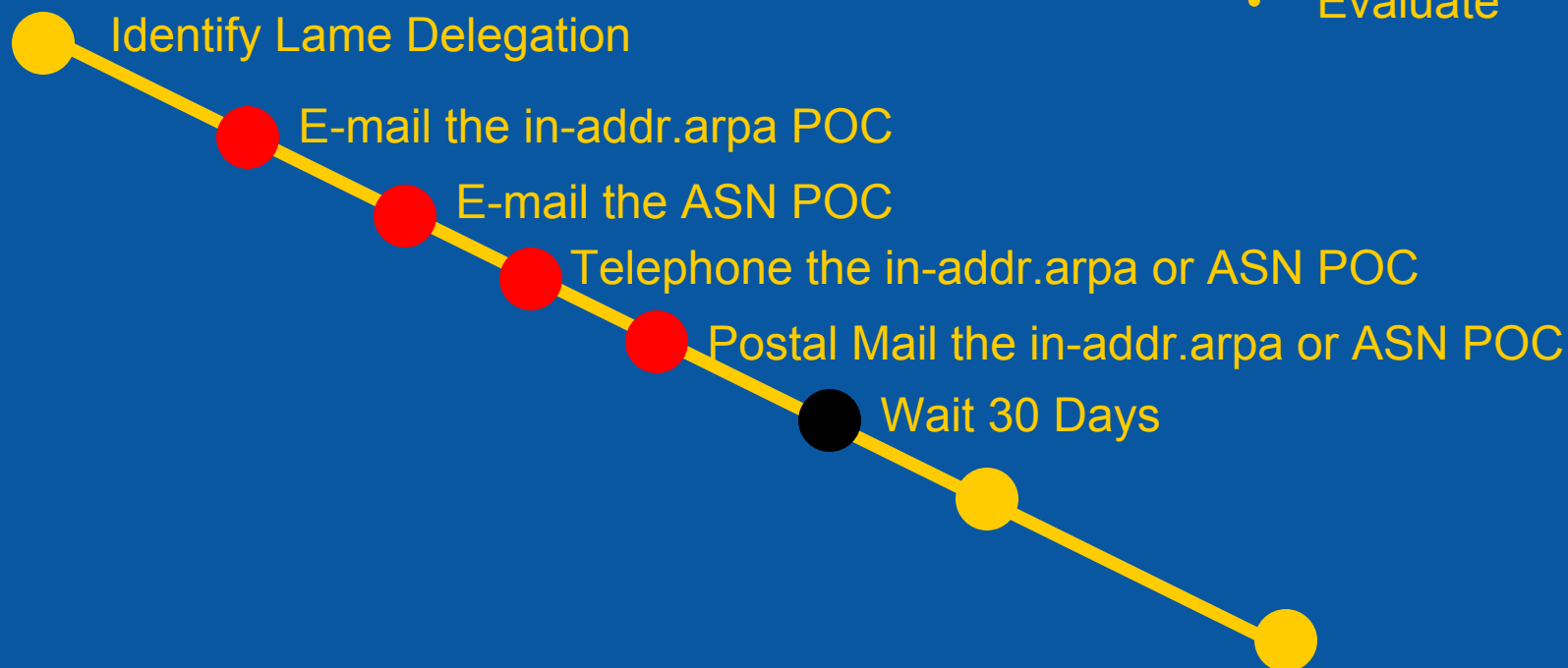




# Policy Summary

## Four Phases

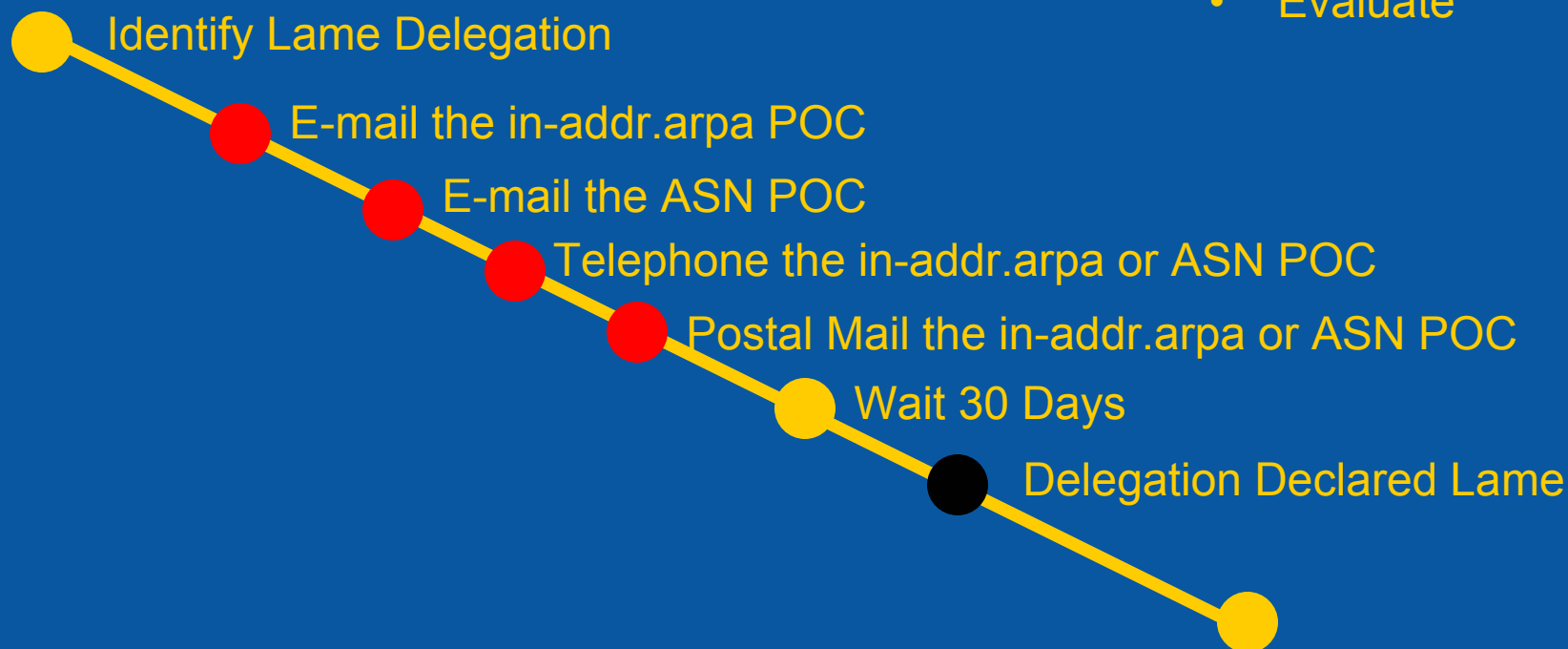
- Test
- Attempt Contact
- Evaluate



# Policy Summary

## Four Phases

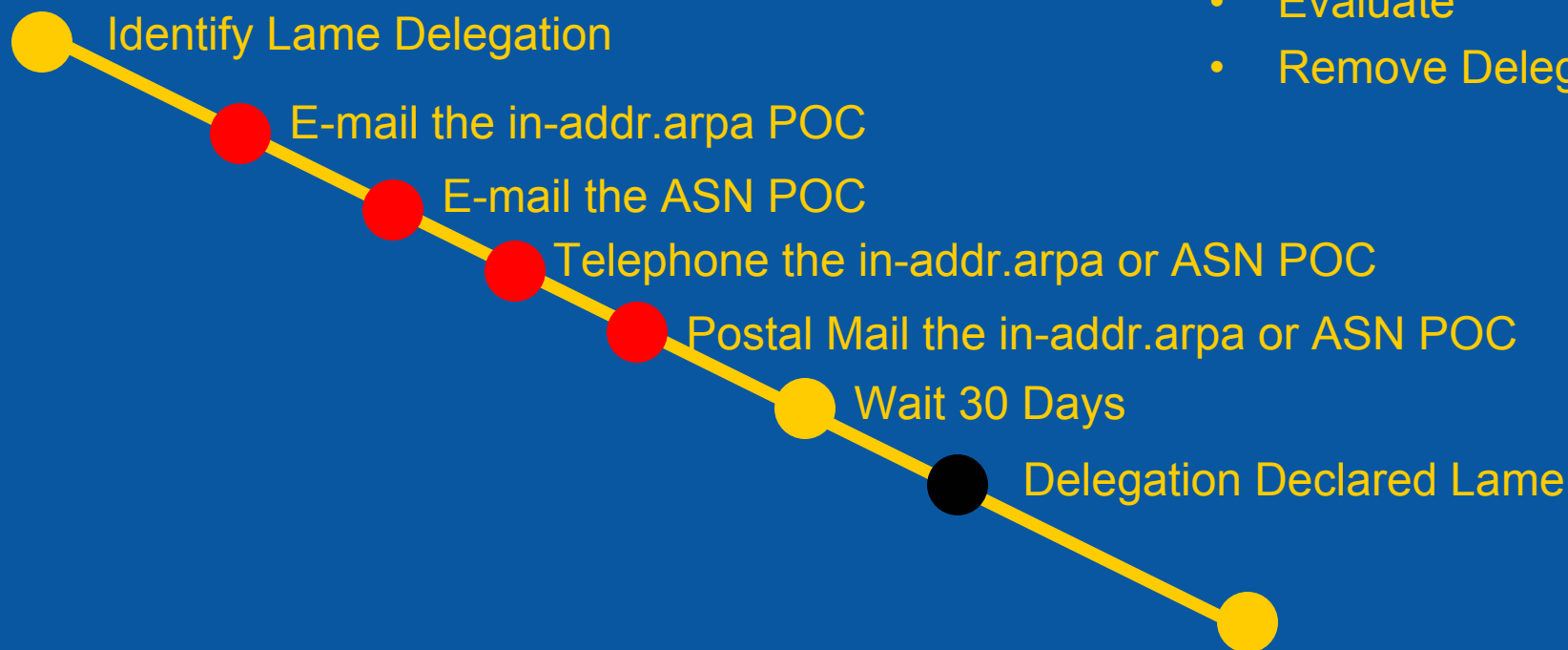
- Test
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- Evaluate



# Policy Summary

## Four Phases

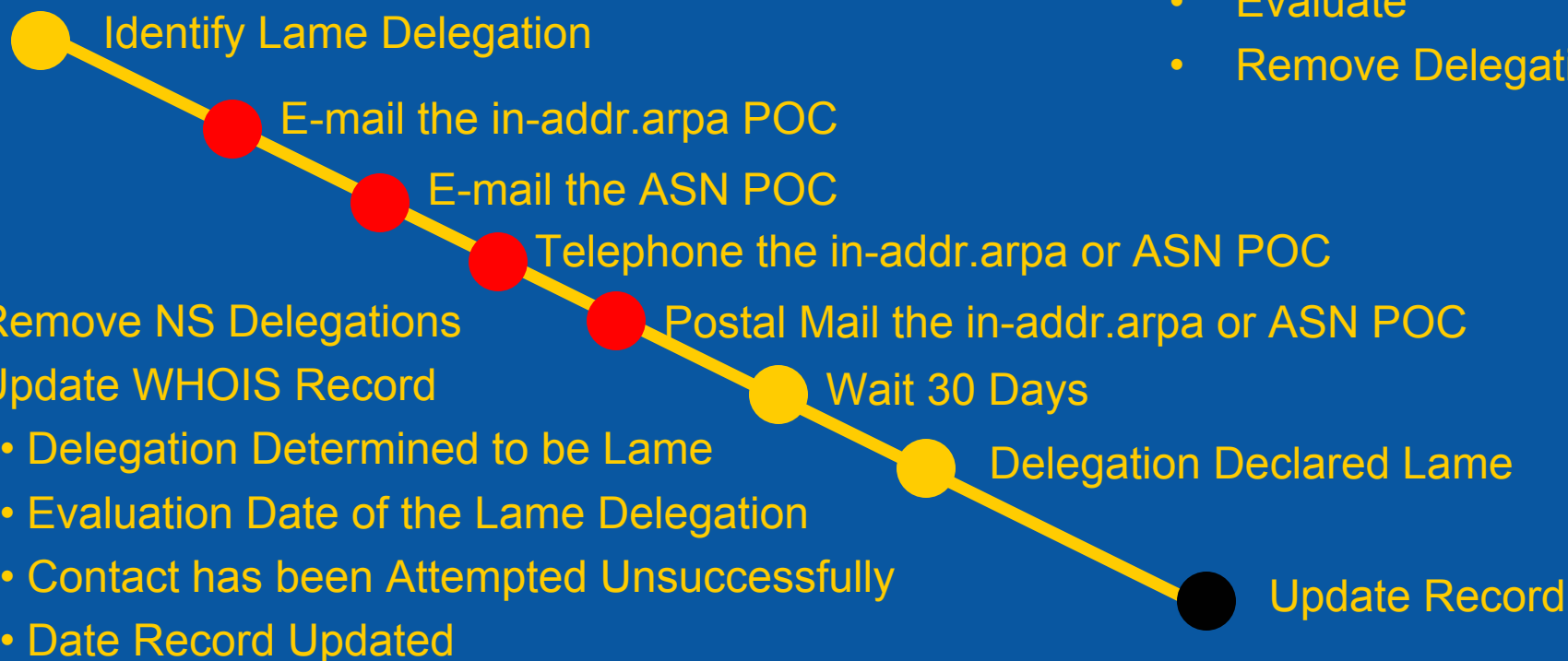
- Test
- Attempt Contact
- Evaluate
- Remove Delegation



# Policy Summary

## Four Phases

- Test
- Attempt Contact
- Evaluate
- Remove Delegation

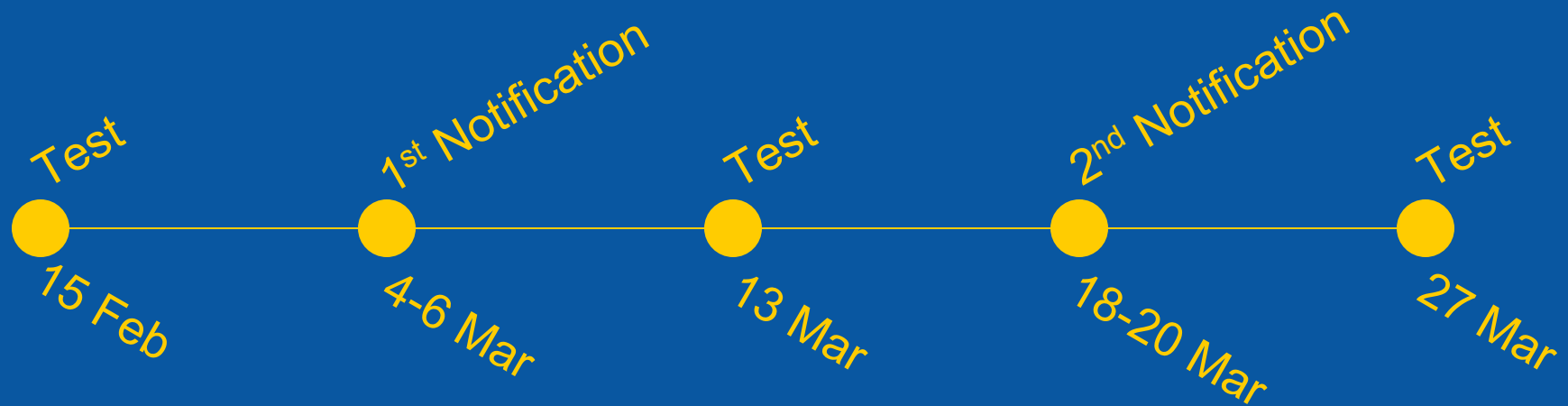


# Lame Delegation Test

- Test For:
  1. No AA bit set
  2. AA bit set, but nothing in the answer section
  3. AA bit set, but answer is not an SOA record
- Not Tested
  1. No IP address for name server - forward look up errors
  2. No connection to name server
  3. No answer - SERVFAIL, NX-DOMAIN error codes

Operational Servers Removed from Subsequent Testing.

# Timeline



# 15 Feb 2003 Results

Zones	Tested	At Least One Bad Server
	198,213	55,281
Servers	Tested	Bad
	467,555	106,322
Bad Server Summary		
No AA Bit Set	AA Bit Set Nothing in Answer	AA Bit Set No SOA Record
88,722	17,599	1

## 4 – 6 March 2003 Notification Results

	1 <sup>st</sup> Week	2 <sup>nd</sup> Week	Total
Telephone Calls	85	40	125
Email	80	39	119



## Help Desk Actions

- Define the problem/exact question.
- Use the “lame” tool to see what the answers look like.
- Use dig to obtain further information.
- Review results with customer
- Define what the expected results should look like.
- Walk through the steps needed to correct information at ARIN.
- Provide Reconfiguration Help Sources by Referring to
  - SA
  - Vendor
  - Bind documentation

# Observations

1. People Are Interested
  - Want to Correct Problem
  - Want Know What This is About
2. This Will be a Deliberate Process

## Next Steps

- Continue Notification Phases
- Update Information
- Continue Testing for Lameness

Thank You